

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Docket Number (Optional)

44046.203.114.4

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Application Number

10/751,335

Filed

January 2, 2004

First Named Inventor

Annette J. Krisko

Art Unit

1775

Examiner

Archene A. Turner

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor.☐ assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)☒ attorney or agent of record.  
Registration number 49,079☐ attorney or agent acting under 37 CFR 1.34.  
Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

/Kara K. Fairbairn/

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August 7, 2007

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☒ \*Total of 1 forms are submitted.

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PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:

Attorney Docket No.: 44046.203.114.4

Krisko, et al.

Application No.: 10/751,335

Examiner: Archene A. Turner

Filed: January 2, 2004

Group Art Unit: 1775

For: CARBON-BASED SOIL-RESISTANT COATINGS FOR GLASS SURFACES

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Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Applicant is respectfully requesting a pre-appeal brief review. Claims 1-5, 7-11, and 13-38 are pending, of which claims 21-28 and 35-38 are withdrawn from consideration pursuant to a restriction requirement. The Examiner is rejecting claims 1-5, 7-11, 13-20 and 29-34 under §103(a) as being unpatentable over Veerasamy (U.S. Patent No. 6,713,179). Applicant respectfully requests review of this rejection. Following are Applicant's arguments that the rejection be withdrawn.

The §103(a) rejection should be withdrawn because the Examiner has failed to make a prima facie case of obviousness. To properly establish a prima facie case of obviousness, MPEP §706.02(j) identifies three basic criteria that must be met. First, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. Second, there must be some suggestion or motivation in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or combine reference teachings. Finally, there must be a reasonable expectation of success. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The Examiner failed to establish a prima facie case of obviousness because (1) Veerasamy fails to teach or suggest all of the claim limitations and (2) there is no suggestion or motivation in Veerasamy itself or in the knowledge generally available to one of ordinary skill in the art to modify Veerasamy to obtain the claimed features.

(1) VEERASAMY FAILS TO TEACH OR SUGGEST ALL OF THE CLAIM LIMITATIONS.

*Veerasamy fails to disclose a carbon layer comprising at least 70% graphite.*

Prior art references used in an obviousness rejection must teach or suggest all of the claim limitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). The Examiner has failed to show that Veerasamy teaches or suggests all of the claim limitations. The claims each require a water-sheeting coating, wherein the coating includes a carbon layer comprising at least 70% graphite. Veerasamy fails to teach or suggest a carbon layer comprising at least 70% graphite. The Examiner even concedes that Veerasamy does not explicitly disclose the claimed amount of graphite in the coating. *See, e.g., Office Action dated February 7, 2007*. Applicant has discovered that the claimed coating provides excellent water-sheeting properties because the coating is hydrophilic, thereby promoting the sheeting of water during water contact with the coating surface. The claimed coating has very different properties than the hard diamond-like coatings taught by Veerasamy. The claimed coating is softer and provides a better lubricating surface than harder diamond-like coatings. This softer surface reduces the abrasion of the coating by allowing an object that contacts the glass surface to better glide over the surface, rather than catching and tearing or scratching the surface as may occur with harder diamond-like coatings. Thus, the claimed coating provides a more enhanced lubricating surface than the diamond-like coating of Veerasamy.

*Veerasamy teaches away from a carbon layer comprising at least 70% graphite.*

Further, not only does Veerasamy fail to disclose the claimed carbon layer, Veerasamy actually teaches away from a coating having a carbon layer with at least 70% graphite. A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the Applicant. *In re Gurley*, 27 F.3d 551, 31 U.S.P.Q.2d 1130 (Fed. Cir. 1994). Veerasamy teaches a hard diamond-like coating that has

strong protective functions and also prevents and/or minimizes the visible stains/corrosion on glass surfaces. *See, e.g., Col. 1, lines 36-40.* Veerasamy also teaches providing an amorphous carbon layer that includes at least about 35%  $sp^3$  carbon-carbon bonds, more preferably at least about 70%, and most preferably at least about 80% of the  $sp^3$  carbon-carbon bonds. *See Abstract.* Likewise, Veerasamy teaches providing an amorphous carbon layer including  $sp^2$  and  $sp^3$  carbon-carbon bonds, wherein the layer has more  $sp^3$  carbon-carbon bonds than  $sp^2$  carbon-carbon bonds. *See, e.g., Col. 2, lines 64-67 to Col. 3, lines 1-2.* Further, Veerasamy teaches providing a carbon layer having a high density of from about 2.4 to 3.4 gm/cm<sup>3</sup>. *See, e.g., Col. 3, lines 18-21.* Veerasamy actually states that the high amount of  $sp^3$  carbon-carbon bonds increases the density of its carbon layer thereby allowing it to prevent soda diffusion. *See, e.g., Col. 5, lines 24-26.* Also, the high number of  $sp^3$  carbon-carbon bonds makes the carbon layer diamond-like and very hard, which makes the layer a strong, protective coating. In a nutshell, all of the teachings in Veerasamy are directed towards providing a hard diamond-like coating that has a high density and a high number of  $sp^3$  carbon-carbon bonds in order to provide a protective, dense coating that minimizes staining and corrosion. The hard, diamond-like coating taught by Veerasamy has very different properties than coating including a carbon layer having a high percentage of graphite as claimed. Thus, Veerasamy teaches away from a carbon layer having a high percentage of graphite, because the resulting coating would be too soft and not dense enough for Veerasamy's intended purpose. Since Veerasamy teaches away from the claimed features, it cannot be used as a reference in an obviousness rejection. Prior art cannot be employed in an obviousness rejection if it teaches away from the claimed invention.

(2) THERE IS NO SUGGESTION OR MOTIVATION IN VEERASAMY ITSELF OR IN THE KNOWLEDGE GENERALLY AVAILABLE TO ONE OF ORDINARY SKILL IN THE ART TO MODIFY VEERASAMY TO OBTAIN THE CLAIMED FEATURES.

When obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference. *See B.F. Goodrich Co. v. Aircraft Breaking Sys. Corp., 72 F.3d 1577, 1582, 37 USPQ2d 1314, 1318 (Fed. Cir. 1996).* The Examiner has failed to show such a suggestion or motivation. The Examiner merely states: "It would have been known from one of ordinary skill in the art to provide the carbon coating with

the claimed amount of graphite, as this increase is known to improve the hydrophilic nature of the coating if that property is desired, as shown by the reference.” *Office Action dated February 7, 2007*. However, Veerasamy simply fails to teach the claimed amount of graphite and in particular fails to teach that an increased amount of graphite improves the hydrophilic nature of a coating. Further, a person of skill in the art would not modify the Veerasamy teachings to obtain a carbon layer having a high percentage of graphite as claimed, because Veerasamy teaches away from the claimed invention, as already discussed above. Still further, if the coatings disclosed in Veerasamy were modified to include the claimed amount of graphite, the coatings would not be the hard, diamond-like coatings required by Veerasamy and would be too soft and not dense enough for Veerasamy’s intended purpose. If the proposed modification renders the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 22 U.S.P.Q. 1125 (Fed. Cir. 1984). Thus, there is no suggestion or motivation to modify Veerasamy to provide the claimed coating.

Applicant respectfully requests that the §103(a) rejections of the claims be withdrawn. In view of the foregoing, it is submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested.

Respectfully submitted,

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